Appl. No.: 10/787,501
Amdt. dated: May 17, 2006
Preliminary Amendment

PATENT

## REMARKS/ARGUMENTS

Claims 25-28 and 31 are pending. Claims 29 and 30 have been canceled without prejudice and without disclaimer. Claims 25-27 have been amended. New claim 31 has been added. No new matter has been introduced. Applicant believes the claims comply with 35 U.S.C. § 112.

Applicant would like to thank Examiner Diller for the courteous interview extended to Applicant's counsel on May 9, 2006.

Claims 25-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Vahalia et al. (US 6,275,953) in view of Yachida (US 5,802,591).

Applicant respectfully submits that independent claim 25 is patentable over Vahalia et al. and Yachida because, for instance, they do not teach or suggest storing access control information in the storage system, in connection with host identification information and logical unit identification information, wherein the LUN security function in the storage system allows the primary host computer to access a specific logical unit of the logical units and disallows the secondary host computer to access the specific logical unit based on the access control information; changing ownership for the specific logical unit from the primary host computer to the secondary host computer by the cluster management functions; and based upon ownership information provided by the cluster management functions, coordinating management of security for the specific logical unit in the management computer based on corresponding information to the access control information, the corresponding information to the access control information being stored in the management computer.

In other words, the references do not disclose or suggest (see Fig. 2 of present application):

(1) the cluster management functions residing in the host computers are used to manage ownership change;

(2) the management computer coordinates and issues the request for changing the access control information to the storage system; and

(3) the storage system manages access control by using the LUN security function.

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Vahalia et al. discloses file ownership, but does not teach or suggest LUN security function to control access to logical units in the storage subsystem. In Vahalia et al., the storage subsystem 23 includes file authorization and ownership 115. "The read-only cache of file authorization and ownership 107 caches file authorization and ownership information 115 stored in the cached disk storage subsystem 23. The file authorization information originates from a particular client that first created the file, although the file authorization information could be changed by the system administrator or another client having authority to change the file authorization information. The file ownership information includes an indication that a particular data mover owns the file, and this data mover ownership originates from the display and keyboard server 28." Column 15, lines 52-62. The authorization and ownership information 115 is merely information stored in the storage subsystem 23 relating to authorization and ownership. It is not an LUN security function that controls access to logical units in the storage subsystem. In Vahalia et al., the authentication module 104 for authenticating the client request and the authorization module 106 for authorizing the requested file access reside in the data mover 101. Therefore, the storage subsystem 23 contains no LUN security function, and does not change access control information for allowing access and disallowing access based on a request.

The Examiner cites Yachida for allegedly disclosing an LUN security function physically located in the storage subsystem. Applicant notes that Yachida does not cure the deficiency of Vahalia et al. because Vahalia et al. does not even disclose an LUN security function. Moreover, Applicant believes Yachida also fails to disclose the LUN security function as claimed.

For at least the foregoing reasons, claim 25 and claims 26-28 depending therefrom are novel and patentable over Vahalia et al. and Yachida.

Applicant further respectfully submits that new claim 31 is patentable over Vahalia et al. and Yachida because, for instance, they do not teach or suggest storing access control information in the storage system, in connection with host identification information and logical unit identification information, wherein the LUN security function in the storage system allows the primary host computer to access a specific logical unit of the logical units and disallows the secondary host computer to access the specific logical unit based on the

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access control information; changing ownership for the specific logical unit from the primary host computer to the secondary host computer by the cluster management functions; and based upon ownership information provided by the cluster management functions, coordinating management of security for the specific logical unit in the management computer based on corresponding information to the access control information, the corresponding information to the access control information being stored in the management computer.
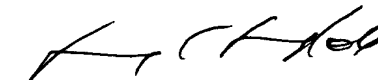
As discussed above, Vahalia et al. and Yachida fail to teach or suggest that the cluster management functions residing in the host computers are used to manage ownership change; that the management computer coordinates and issues the request for changing the access control information to the storage system; and that the storage system manages access control by using the LUN security function.

## CONCLUSION

In view of the foregoing, Applicant believes all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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